Total Knee Arthroplasty – Patient Guide & Common Questions

Introduction:

This handout is a general guide to common indications for total knee arthroplasty (replacement), what to expect when undergoing the procedure, risks, and general recovery information. This is not a comprehensive guide, however, and any questions or concerns should be addressed directly with your surgeon.

How is a Knee Arthroplasty performed?

- A knee arthroplasty (replacement) has four basic steps:
  - Prepare the bone – The damaged cartilage surfaces at the ends of the femur and tibia are removed along with a small amount of underlying bone.
  - Position the metal implants – The removed cartilage and bone is replaced with metal components that recreate the surface of the joint. These metal parts may be cemented or "press-fit" into the bone.
  - Resurface the patella – The undersurface of the patella (kneecap) is cut and resurfaced with a plastic button. Some surgeons do not resurface the patella, depending on the case.
  - Insert a spacer – A medical-grade plastic spacer is inserted between the metal components to create a smooth gliding surface.

Is a Total Knee Replacement right for me?

- The decision to undergo a total knee replacement should be made cooperatively by you, your family, your primary care physician and your orthopedic surgeon.
- There are no absolute age or weight restrictions for total knee replacement surgery.
- The most common cause of chronic knee pain and disability is arthritis, and most knee pain is caused by three types of arthritis: Osteoarthritis, Rheumatoid arthritis, and Post-traumatic arthritis.
- If nonsurgical treatments, like medications, walking supports or physical therapy are no longer helpful, you may want to consider total knee replacement surgery.
- People that may benefit from total knee replacement surgery often have:
  - Severe knee pain or stiffness that limits everyday activities, like walking, climbing stairs, getting in and out of bed, etc.
  - Moderate or severe knee pain while resting, either day or night.
  - Chronic knee inflammation and swelling that does not improve with rest of medications.
  - Knee deformity – a bowing in or out of your knee.
  - Failure to substantially improve with other treatments such as anti-inflammatory medications, cortisone injections, lubricating injections, physical therapy, or other surgeries.
- When deciding whether to have the surgery, it is important to factor in realistic expectations for what the procedure can and cannot do.
  - More than 90% of people who undergo total knee replacement experience a dramatic reduction of knee pain and a significant improvement in the ability to perform common

activities of daily living. It will not allow you to do more than you could before developing arthritis.

As you prepare for your knee replacement, your orthopedic surgeon may ask you to:

- Have a physical examination by your primary care physician
- Take several tests, such as blood or urine, EKG, and chest x-rays
- Adjust your current medications prior to surgery
- Lose weight prior to surgery to minimize stress and possibly decrease surgery risks
- Have dental evaluation (because bacteria can enter bloodstream during dental procedures, all major dental procedures (tooth extraction or periodontal work) should be done prior to knee surgery.

The Procedure:

- The procedure takes approximately 1 to 2 hours. Your orthopedic surgeon will remove the damaged cartilage and bone, and then position the new metal and plastic implants to restore the alignment and function of your knee.
- After surgery, you will be moved to a recovery room, where you will remain for several hours while your recovery from the anesthesia is monitored. When you wake up, you will be taken to your hospital room.
- You will most likely stay in the hospital for a few days

After Surgery:

- After your surgery, you will most likely feel some pain, but your nurses/surgeon will provide medication to make you feel as comfortable as possible. Talk with your surgeon if post-operative pain becomes a problem. Walking and knee movement will begin soon after surgery, and when you feel less pain, you can start moving sooner and get your strength back more quickly.
- Most patients begin exercising their knee the day after surgery. In some cases, patients begin moving their knee on the actual day of surgery. A physical therapist will teach you specific exercises to strengthen your leg and restore knee movement to allow walking and other normal daily activities soon after surgery.
- To restore movement in your knee/leg, your surgeon may use a knee support that slowly moves your knee while you are in bed. The device is called a continuous passive motion (CPM) exercise machine. Discuss use of this machine with your surgeon.
- Several home modifications can make your home easier to navigate during your recovery:
  - Safety bars or a secure handrail in shower/bath
  - Secure handrails along stairways
  - Stable chair for early recovery with firm seat cushion (height of 18 to 20 inches), firm back, two arms, and a footstool for intermittent leg elevation.
  - Toilet seat riser with arms
  - Stable shower bench/chair for bathing
  - Removing all loose carpets and cords

  - Temporary living space on the same floor because walking up or down stairs will be more difficult during your early recovery
- It is common for patients to have shallow breathing post-operatively (due to effects of anesthesia, pain medication, increased time spent in bed). This shallow breathing can lead to a partial collapse of the lungs ("atelectasis") that makes patients susceptible to pneumonia. To prevent this, your nurse may provide a simple breathing apparatus ("spirometer) to encourage you to take deep breaths.
- Your surgeon may prescribe one or more measures to prevent blood clots and decrease leg swelling. These may include special support hose, inflatable leg coverings (compression boots) and/or blood thinners.
- Some loss of appetite is common for several week after surgery. It is important to promote proper tissue healing and restore muscle strength, so be sure to have a balanced diet, often with an iron supplement. Drink plenty of fluids.
- You will have stitches or staples running along your wound or a suture beneath your skin on the front of your knee. The stiches/staples will be removed several weeks after surgery. A suture beneath your skin will not require removal. Avoid soaking the wound in water until it has thoroughly sealed and dried. You may continue to bandage the wound to prevent irritation from clothing or support stockings.
- Exercise is crucial to home care, particularly during the first few weeks after surgery. You should be able to resume normal light activities of daily living within 3 to 6 weeks following surgery. Some discomfort with activity and at night is common for several weeks.
- Activity should include:
  - Graduated walking program
  - Resuming normal household activities
  - Specific exercises as recommended by your surgeon and/or physical therapist
- You will most likely be able to resume driving when your knee bends enough that you can enter and sit comfortably in your car, and when your muscle control provides adequate reaction time for braking/acceleration. Most people resume driving 4 to 6 weeks after surgery.
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Possible complications can include:

  - Infection
  - Blood clots/pulmonary embolism
  - Dislocation
  - Loosening and Implant Wear
  - Other complications (nerve and blood vessel injury, bleeding, fracture, stiffness)

Precautions:

- It is very important to prevent infection. Following surgery, patients with certain risk factors may need to take antibiotics prior to any dental or medical work before any surgical procedure that could allow bacteria to enter your bloodstream.
- Warning signs of an infection include:
  - Persistent fever (higher than 100 degrees Fahrenheit orally)
  - Shaking chills
  - Increasing redness, tenderness, or swelling of the knee wound
  - Drainage from the knee wound

  - Increasing knee pain with both activity and rest
- Warning signs of blood clots include:
  - Increasing pain in your calf
  - Tenderness or redness above or below knee
  - New or increasing swelling in your calf, ankle and foot
- Warning signs of pulmonary embolism include:
  - Sudden shortness of breath
  - Sudden onset of chest pain
  - Localized chest pain with coughing
- It is very important to avoid falling. A fall during the first few weeks after surgery can damage your new knee and may result in a need for more surgery. Stairs are a particular hazard, and you should use a cane, crutches, a walker, or handrails when using stairs, or have someone help you, until you improve your balance, strength and flexibility.
- You may be asked to take special precautions when sitting, bending, or sleeping in order to assure proper recovery and prevent dislocation of the prosthesis. Precautions vary patient to patient, and your surgeon/physical therapist will discuss any specific precautions with you prior to hospital discharge.
- Follow your orthopedic surgeon's directions carefully to reduce the risk of a blood clot during first several weeks of your recovery.
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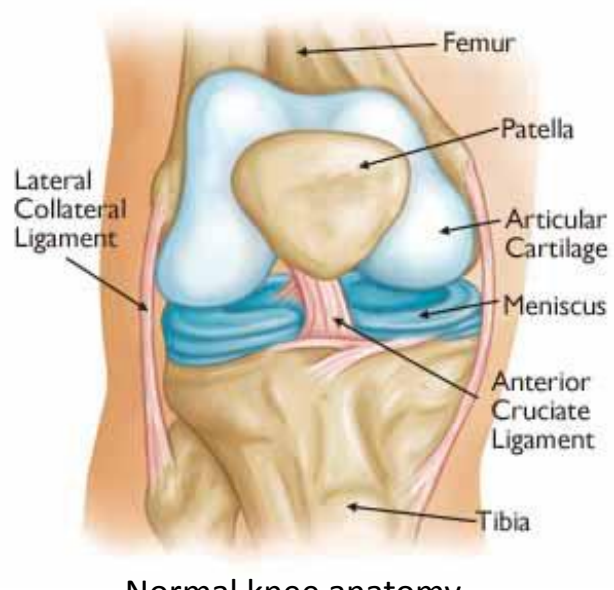
Protecting the life of your Knee:

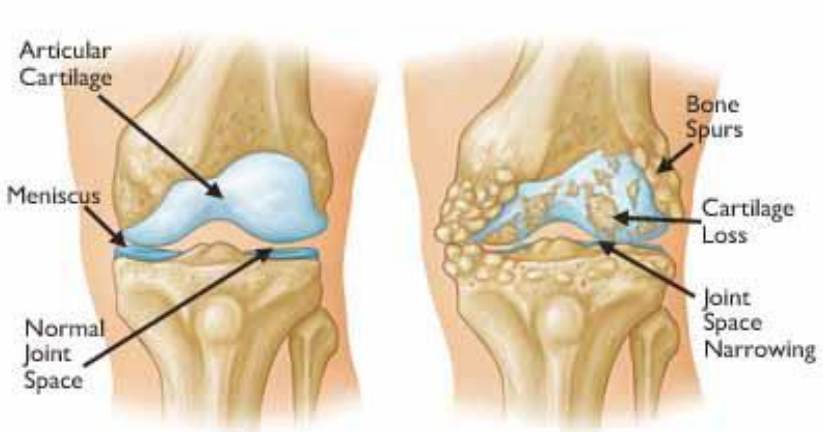
- In order to protect your knee replacement and extend the life of your knee implant, your surgeon may recommend the following:
  - Participate in a regular light exercise program to maintain proper strength and mobility of the new knee
  - Take special precautions to avoid falls and injuries.
  - Make sure your dentist knows you have a knee replacement, and speak with your surgeon about whether you need antibiotics prior to dental procedures
  - See your orthopedic surgeon periodically for routine follow-up examinations and x-rays, even if your knee replacement seems to be doing fine

Never hesitate to call our office with any questions or concerns – 512.476.2830

For more information: www.texashipandknee.com

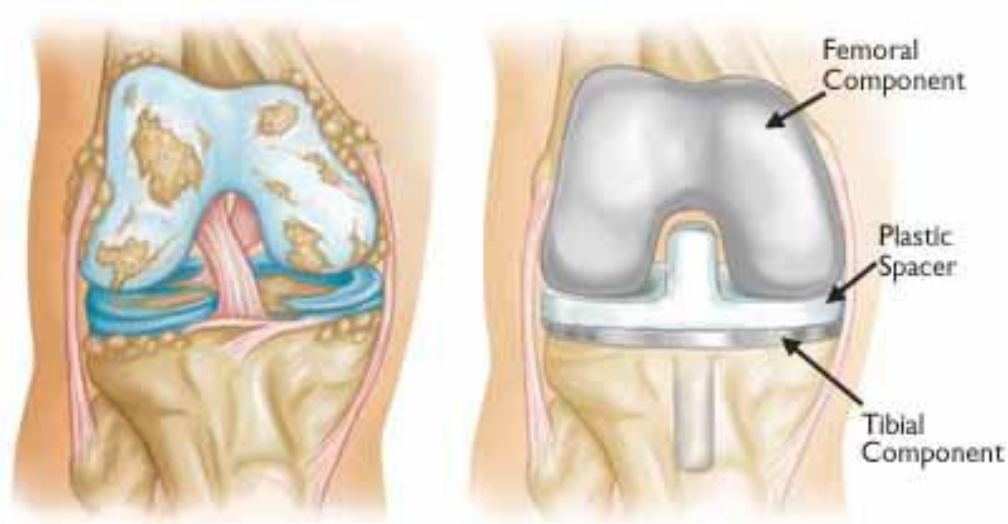


Normal knee anatomy

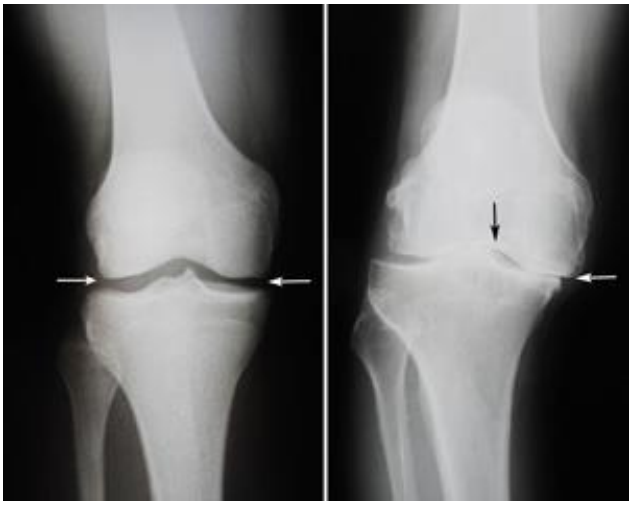


Osteoarthritis often results in bone rubbing on bone. Bone spurs are a common feature of this form of arthritis.

A knee that has become bowed as a result of severe arthritis.

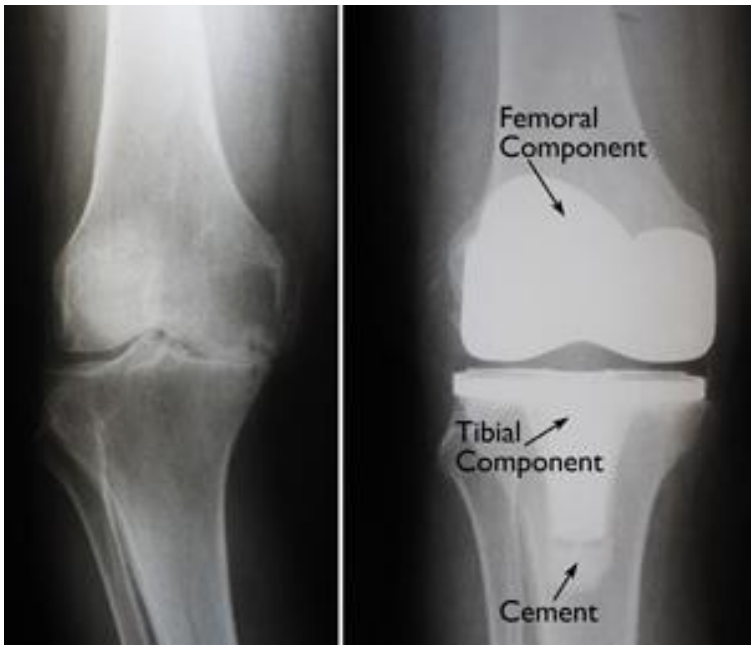


(Left) Severe osteoarthritis. (Right) The arthritic cartilage and underlying bone has been removed and resurfaced with metal implants on the femur and tibia. A plastic spacer has been placed in between the implants. The patellar component is not shown for clarity.



(Left) In this x-ray of a normal knee, the space between the bones indicates healthy cartilage (arrows). (Right) This x-ray of a knee that has become bowed from arthritis shows severe loss of joint space (arrows).

Different types of knee implants are used to meet each patient's individual needs.



(Left) An x-ray of a severely arthritic knee. (Right) The x-ray appearance of a total knee replacement. Note that the plastic spacer inserted between the components does not show up in an x-ray.